

SYSNCP - Keyword Maintenance

Keywords are the basic components for defining functions. Before it is possible to define keywords, the header maintenance records must be created (see the section Header Records).

- Define Keywords
- Editor Commands
- Positioning Commands
- Line Commands

Define Keywords

Keywords used in commands are created with the Define Keywords function and the Keyword Editor. The Keyword Editor is similar to existing Natural editors except that lines of the editor are broken up into separate fields. Most of the editor commands (see the relevant section) and the line commands (see the relevant section) which are used in the Natural program editor can also be used in the Keyword Editor.

To invoke the Keyword Editor

1. On the Processor Source Maintenance menu, enter Function Code **K** (Define Keywords).
2. Press ENTER.
The Keyword Editor screen is displayed.

The Keyword Editor screen is shown below. Several keywords have already been defined to serve as examples for this section.

09:42:39		- SYSNCP Keyword Editor -				2000-05-04	
Modify Keywords		Name SAGTEST		Library SYSNCP	DBID 10	FNR 32	
I	Line	E	Use	Keyword	IKN	ML	Comment
-	-	-	-	-	-	-	-
	1	1	Acti	MENU	1004	1	
	2	1	Acti	DISPLAY	1002	2	
	3	S	Syno	SHOW	1002	1	
	4	1	Acti	DELETE	1001	2	
	5	S	Syno	PURGE	1001	1	
	6	S	Syno	ERASE	1001	1	
	7	1	Acti	FILE	1003	4	
	8	P	Parm	NAME	4002	2	
	9	2	Obje	FILE	2001	4	
	10	P	Parm	NUMBER	4001	2	
	11	2	Obje	DOCUMENT	2003	2	
	12	1	Acti	INFORMATION	1005	1	
	13						
	14						
-	-	-	-	- All -	-	-	-
Command ==>							
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---							
Help		Cmd	Exit	Last	List	Flip	-1 +1 Top Bot Info Canc

Enter in the Keyword Editor all the keywords which you want to have in your command language. These can be entered in any order desired, except synonyms, which must immediately follow the keywords they are related to. To each keyword you assign a type which specifies to which part of command syntax the keyword belongs. Rules of command syntax for a command processor are specified in the processor header; see Keyword Runtime Options - Header 1 in the section Header Records. For example, you can specify whether a keyword is to be of type 1 (entered in first position in a command), type 2, type 3, a synonym for another keyword or a parameter indicator.

Note:

A command language requires a strict syntax because, to date, no computer is capable of understanding semantics. Word type is, therefore, the only practical way to communicate meaning in a command language.

In the example above, the keywords DELETE and DISPLAY are defined as keywords of type 1. As specified in the processor header, these keywords denote actions. The keyword DOCUMENT is defined as a keyword of type 2 and it denotes an object. The keyword FILE, however, is defined as both type 1 and 2, and it can, therefore, denote an action or an object, depending on where it is positioned in the command. It is possible to compose the two keyword types to make commands, such as DELETE FILE and FILE DOCUMENT.

You can save the keywords you have entered by issuing the SAVE or STOW command from the command line. In addition to saving the keyword definitions in source form, the STOW command performs a consistency check on them. Once a keyword is stowed successfully, it is given an internal keyword number (IKN) which is used at runtime to evaluate a command. Synonyms are always linked to a master keyword and always take the IKN of their master.

Each line in the Keyword Editor contains the following fields:

Field	Explanation
I	Output field. An information field which can contain the following values: E Indicates that a definition error has been detected. X Line is marked with X. Y Line is marked with Y. Z Line is marked with both X and Y. S Scan value found in this line.
Line	Output field. The line number of the editor.
E	Specifies the entry type for a keyword; that is, the position the keyword is to be entered in a command: first, second or third position, synonym or parameter indicator. For instance, in the Keyword Editor screen example above the keyword DELETE is of entry type 1 and DOCUMENT of type 2. Using these keywords, the command DELETE DOCUMENT can be defined. The field takes any of the following characters as input: 1 The keyword defined in this line is to be used as the first entry in a command sequence. 2 The keyword defined in this line is to be used as the second entry in a command sequence. 3 The keyword defined in this line is to be used as the third entry in a command sequence. S The keyword defined in this line is to be used as a synonym for the preceding keyword with entry type 1, 2, 3 or P. P The keyword defined in this line is to be used as a parameter indicator in a command sequence. * No keyword is to be defined in this line. Instead, the line is to be used solely as a comment line. ? This symbol is an output value which indicates an invalid keyword specification.
Use	Output field. The value displayed is determined by the value entered in the preceding field E: 1 - 3 The first four characters of the user text specified in the processor header for the first, second and third keyword entries respectively are displayed. See also Keyword Editor Options - Header 2 in the section Header Records. S SYNO, the abbreviation for synonym, is displayed. P PARM, the abbreviation for parameter indicator, is displayed.
Keyword	Enter the keyword to be defined. Embedded blanks are not permitted. If you have specified in the processor header that keywords can only be upper case, then keywords are always translated to upper case, regardless of how they are entered. Otherwise, the case remains as entered. The maximum and minimum length of keywords depends on the settings specified in the header (default: 1 - 16 characters). Keywords must be unique unless specified otherwise in the header. Keyword prefixes can be used as described in Keyword Editor Options - Header 2 in the section Header Records.
IKN	Output field. The Internal Keyword Number (IKN) is an identifier assigned to each valid keyword. IKNs are useful for testing and debugging. They are allocated only when a keyword is successfully stowed (see also the STOW command under Editor Commands). Each keyword is assigned a unique IKN, except synonyms, which take the IKN of their master term (see the Keyword Editor screen example above: DISPLAY and SHOW).

Field	Explanation
ML	<p>Input and output field indicating the minimum length of a keyword. The field is an input field if S is specified in the Dynamic Length Adjustment field of the processor header as described in "Keyword Runtime Options - Header 1", Header Records. In this case, you must specify the number of characters which must be entered for the keyword. For all other input, this field contains the minimum number of characters of a keyword a user must specify to avoid ambiguity with other keywords.</p> <p>For instance, in the Keyword Editor screen example above, keyword MENU requires only input of M while keyword DISPLAY requires input of DI to avoid ambiguity with keyword DELETE.</p>
Comment	<p>Enter free text for a keyword. There are no input restrictions. The user text is included in the cataloged command processor if the field Catalog User Texts is set to Y in the header definition as described in "Miscellaneous Options - Header 3", Header Records. It can be read at runtime using the TEXT option of the PROCESS COMMAND statement. The header text appearing at the top of this column is controlled by the header definition fields "Header for User Text 1" and "Header for User Text 2".</p>

Editor Commands

In the command line of the Keyword Editor, you can enter the following commands:

Command	Function
ADD	Adds ten empty lines to the end of the editor.
CANCEL	Returns to Processor Maintenance Menu.
CHECK	Tests the keyword source for consistency.
EXIT	Returns to Processor Maintenance Menu.
HELP	Displays valid escape characters and other useful processor settings.
INFO	Displays information on the keyword on which your cursor is positioned.
LET	Undoes all modifications made to the current screen since the last time ENTER was pressed.
POINT	Positions the line in which a line command .N is entered to the top of the current screen.
RECOVER	Returns keyword source that existed before last SAVE/STOW.
RESET	Deletes the current X and Y line markers.
SAVE	Keyword source is saved.
SCAN	Scans for the next occurrence of the scan value.
STOW	Keyword source is stowed and Internal Keyword Numbers (IKNs) are generated for valid keywords.

Positioning Commands

Editor positioning commands are the same as the ones provided for the Natural program editor. For more information, see the description of the program editor in the Natural Editors documentation.

The last line of the editor contains an output field which informs you of where your display is located in the editor. The following output values are displayed:

Top	Editor is currently positioned at the top of the keyword source.
Mid	Editor is currently positioned at the center of the keyword source.
Bot	Editor is currently positioned at the bottom of the keyword source.
Emp	Editor is currently empty.
All	The entire source is contained on the current screen.

Line Commands

Line commands in the Keyword Editor are the same as in the Natural program editor with the exception of the commands .J and .S, which cannot be used.

Each command is entered beginning in the **E** field; the remaining part of the command is entered in the Keyword field, as illustrated in the screen below:

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Modify Keywords		Name SAGTEST		Library	SYSNCP	DBID 10	FNR 32
I	Line	E	Use	Keyword	IKN	ML	Comment
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	1	1	Acti	MENU	1004	1	
	2	1	Acti	DISPLAY	1002	2	
	3	S	Syno	SHOW	1002	1	
	4	.	Acti	i(3) TE	1001	2	
	5	S	Syno	PURGE	1001	1	

Attention:

When you move (.M) or copy (.C) lines, ensure that individual keywords are always moved or copied together with their synonyms.

When you delete (.D) lines, the corresponding keywords and any functions containing these keywords will not be deleted from the database until you issue the STOW editor command. As long as you do not issue the STOW command, these functions will still be displayed within the Function Editor.